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# SUMATRA

Installation guide for SUMATRA 2.x version.

## Change History

Version	Date	Author	Comments
1.0	22/04/2005	C.ALFRED	Creation of document Taking into account quality remarks
1.1	30/06/2005	C.ALFRED	Taking into account being recipe remarks
1.2	13/07/2005	JM. SINKUIN	Specific instructions on <i>Pourquoi pas ?</i> posts
1.3	31/08/2005	JM. SINKUIN	Installation aboard <i>Pourquoi pas ?</i>
1.4	10/10/2005	JM. SINKUIN	Installation to Module on Road Measures
2.0	26/11/2008	JM. SINKUIN	Installation to CSIRO – According to 1.8.5 version
2.1	03/03/2009	JM. SINKUIN	According to 1.8.6 version

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<i>Approval</i> :	<i>Date</i> :	<i>Visa</i> :

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## 1 Introduction

This document is part of the development of SUMATRA software.

It is the installation manual and software generation for SUMATRA.

## 2 Reference documents

Nomenclature	Version	Titre	Auteur
DNIS/ESI/DLE/DTI/04-045	1.1	Annexe technique : Logiciel de suivi de mission temps réel : SUMATRA Dossier des Spécifications Fonctionnelles Préliminaires SUMATRA niveaux I et II	Ifremer
Octobre 2003		Annexe n°1 de l'appel d'offre Règlement de consultation pour la réalisation d'un logiciel de suivi temps réel de mission	Ifremer
Octobre 2003		Complément à l'annexe n°1 de l'appel d'offre Règlement de consultation pour la réalisation d'une logiciel de suivi temps réel de mission	Ifremer
31 Mars 2003	1.1	Serveur de données archivées	SHOM
CS/113-1/DL/VV/AB033525	V3	Proposition soumise à IFREMER pour le projet SUMATRA	CS
Contrat n°04/1215104/B		Réalisation du logiciel de suivi temps réel de mission : SUMATRA	Ifremer/CS
CS/113-1/SUMATRA-DSF-010-CS DOP/CB/ILE/DTI/05-136	1.3	Dossier des Spécifications Fonctionnelles SUMATRA	CS

### 3 PREREQUISITE

#### 3.1 Hardware Requirements

The entire SUMATRA software is developed for PC platforms with Microsoft Windows XP Professional Version 2002 with Service Pack 3.

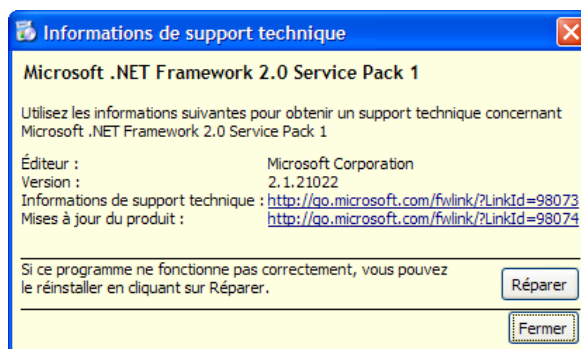
#### 3.2 Additionnal hardware requirements

The thermal plotter 9208 of EPC Lab must be connected at the same network with a 100Mb/s connexion.

#### 3.3 Software Requirements

For a correct installation of SUMATRA, it is necessary to install the following:

- ArcGIS (or ArcEditor) 9.2 service pack 6,
- French supplement for ArcGIS 9.2 (Service Pack 6) only for french configuration,
- The framework .NET version 2.0 SP1,

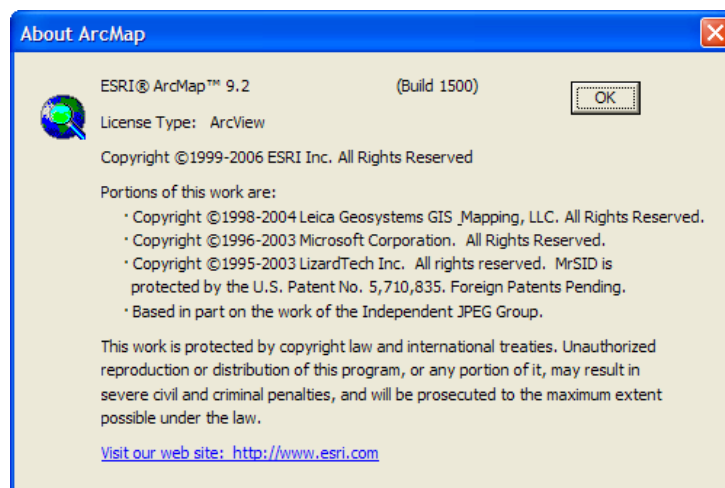


- The driver for thermal plotter (HSP\_Driver).

Note : the installation of ArcGIS must follow these steps:

- Installation of ArcGIS version 9.2,
- Installation of the french version 9.2,
- Installation of Service Pack 6 build 1500.





We advice to install ArcGIS products under C:\Program Files\ArcGIS. In other case, you have to copy the SUMATRA.mxt file located under C:\Program Files\Sumatra to the ESRI templates directory.

In other case, you will receive this message, when you try ton launch SUMATRA.





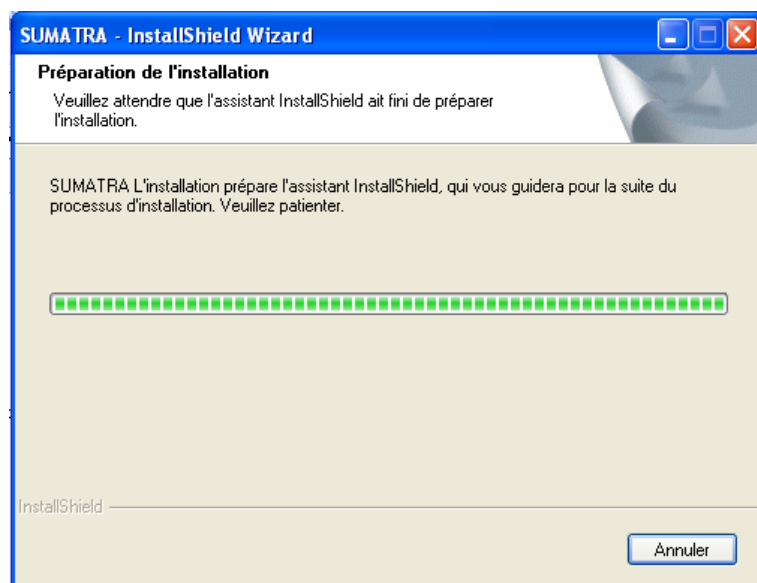
## 4 INSTALLATION PROCESS

The CD ROM contains an install wizard SUMATRA with an executable file (Setup.exe) to be launched to start installing SUMATRA. This executable is located in the **Exploitation** directory located at the root of the CD ROM.

### 4.1 Installation

The installation of SUMATRA must be from an account with the rights Administrator Windows on this computer.

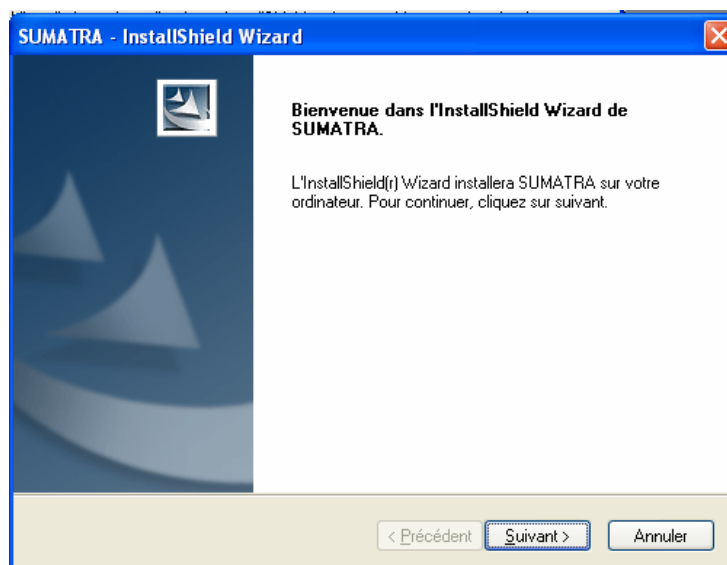
Launch the Setup.exe. This dialog box appears:



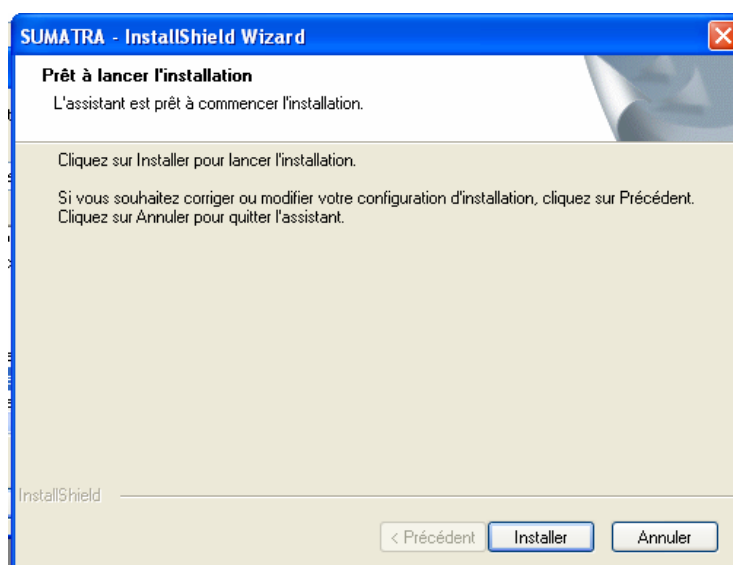
*Figure 1 : Preparing to install*

The installer prepares to install SUMATRA.

The first window will launch the installation by clicking the button “next >”:

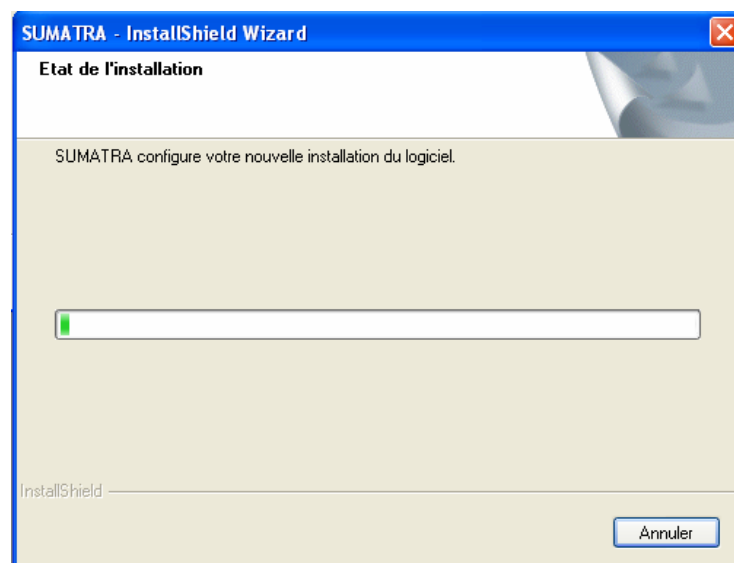


*Figure 2 : Home window*



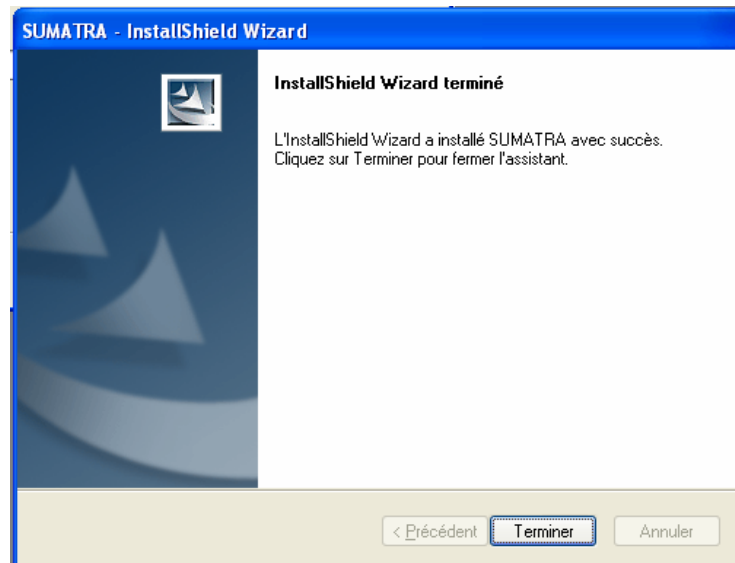
*Figure 3 : Ready to launch the installation*

The installer then started copying files to install and runs the installation scripts:



*Figure 4 : Progress*

The installation is complete.

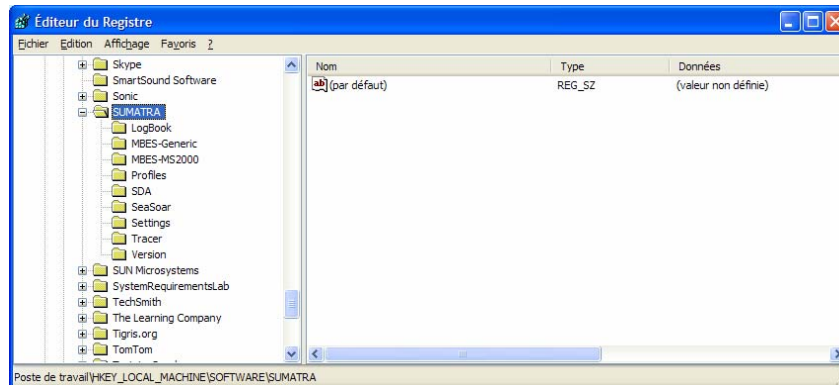


*Figure 5 : End of installation*

Depending on the configuration, the installation may request a restart of the computer.

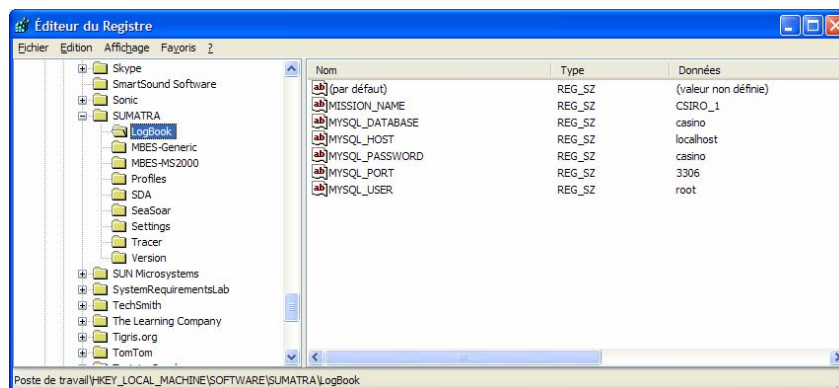
## 4.2 Upgrading the registry

In the registry, during the installation of SUMATRA, one key SUMATRA is added to HKEY\_LOCAL\_MACHINE\SOFTWARE.



This key contains the following sections :

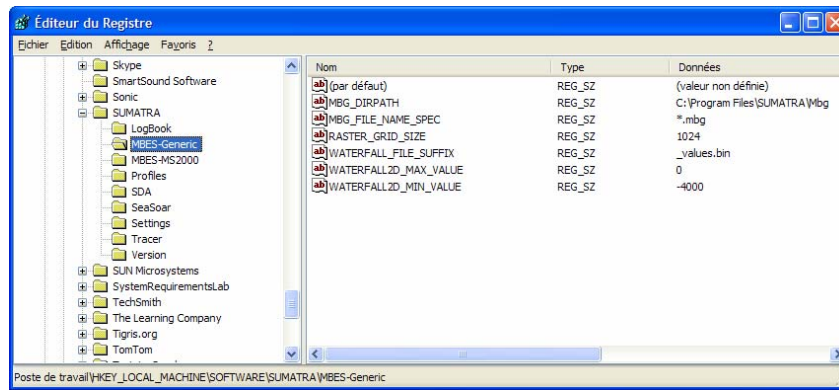
- Logbook :



<i>Key</i>	<i>Description</i>	<i>Default</i>	<i>Changeable in MMI SUMATRA</i>
MISSION_NAME	Name of the default mission	Mission1	No
MYSQL_DATABASE	Name of the MySQL database	casino	No
MYSQL_HOST	Name or IP address of the host of the MySQL database	localhost	No
MYSQL_PASSWORD	Password for the connexion to	casino	No

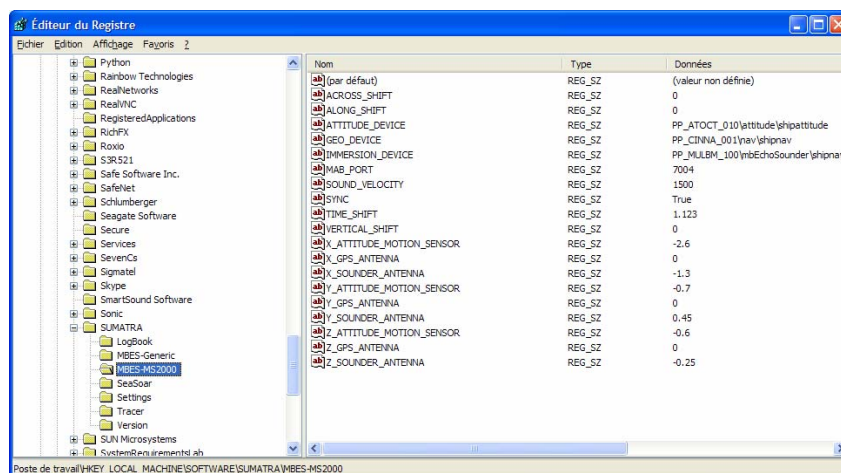
	the MySQL database		
MYSQL_PORT	Port for the connexion to the MySQL database	3306	No
MYSQL_USER	User for the connexion to the MySQL database	root	No

- MBES-Generic



<i>Key</i>	<i>Description</i>	<i>Default</i>	<i>Changeable in MMI SUMATRA</i>
MBG_DIRPATH	Directory path where are located mbg files	C:\Program Files\SUMATRA\Mbg	Yes
MBG_FILE_NAME_SPEC	Extension mbg file	*.mbg	No
RASTER_GRID_SIZE	Grid size raster	1024	No
WATERFALL_FILE_SUFFIX	Aggregates to use	_values.bin	No
WATERFALL_2D_MAX_VALUE	Min depth used by waterfall tool	0	Yes
WATERFALL_2D_MIN_VALUE	Min depth used by waterfall tool	-4000	Yes

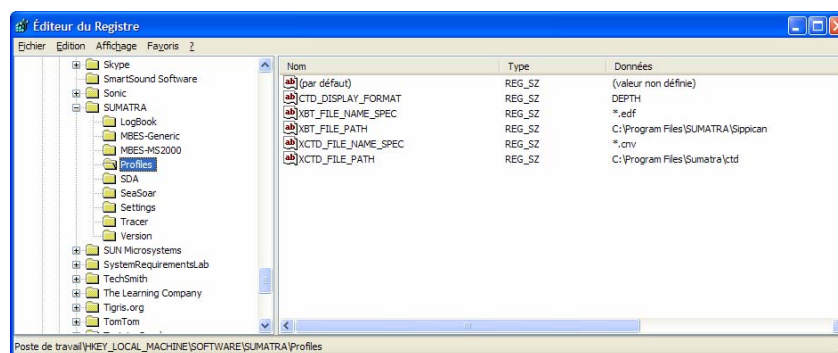
- MBES-MS2000



<i>Key</i>	<i>Description</i>	<i>Default</i>	<i>Changeable in MMI SUMATRA</i>
ACROSS_SHIFT	Along distances with along shift	0.0	Yes
ALONG_SHIFT	Across distances with across shift	0.0	Yes
ATTITUDE_DEVICE	Device name for attitude values		Yes
GEO_DEVICE	Device name for positioning values		Yes
IMMERSION_DEVICE	Device name for depth values		Yes
MAB_PORT	UDP number port	7004	No
SOUND_VELOCITY	Default sound velocity value	1500	Yes
SYNC	To force synchronisation between bathymetry and attitude sensor.	True	No
TIME_SHIFT	The time shift is added to the "Bathymetry/Attitude time shift" for the calculation of global time shift for the current option	1.123	Yes
VERTICAL_SHIFT	Depth with verticals shift	0.0	Yes
X_ATTITUDE_MOTION_SENSOR	Across ship direction, positive starboard	-2.6	Yes
X_GPS_ANTENNA	Across ship direction, positive starboard	0	Yes
X_SOUNDER_ANTENNA	Across ship direction, positive starboard	-1.3	Yes

Y_ATTITUDE_MOTION_SENSOR	Ship's axis direction, positive bow	-0.7	Yes
Y_GPS_ANTENNA	Ship's axis direction, positive bow	0	Yes
Y_SOUNDER_ANTENNA	Ship's axis direction, positive bow	0.45	Yes
Z_ATTITUDE_MOTION_SENSOR	Perpendicular direction, positive below	-0.6	Yes
Z_GPS_ANTENNA	Perpendicular direction, positive below	0	Yes
Z_SOUNDER_ANTENNA	Perpendicular direction, positive below	-0.25	Yes

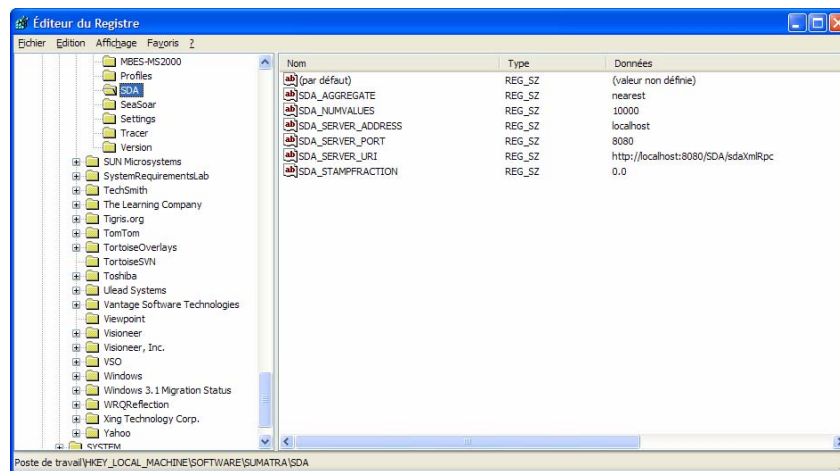
- Profile



<i>Key</i>	<i>Description</i>	<i>Default</i>	<i>Changeable in MMI SUMATRA</i>
CTD_DISPLAY_FORMAT	Units of the ordinate axis	DEPTH	Yes
CTD_FILE_NAME_SPEC	Extension data files XBT	*.edf	Yes
CTD_FILE_PATH	Path and name of directories of files XBT		Yes
XCTD_FILE_NAME_SPEC	Extension data files XCTD	*.cnv	Yes
XCTD_FILE_PATH	Path and name of directories of files XCTD		Yes

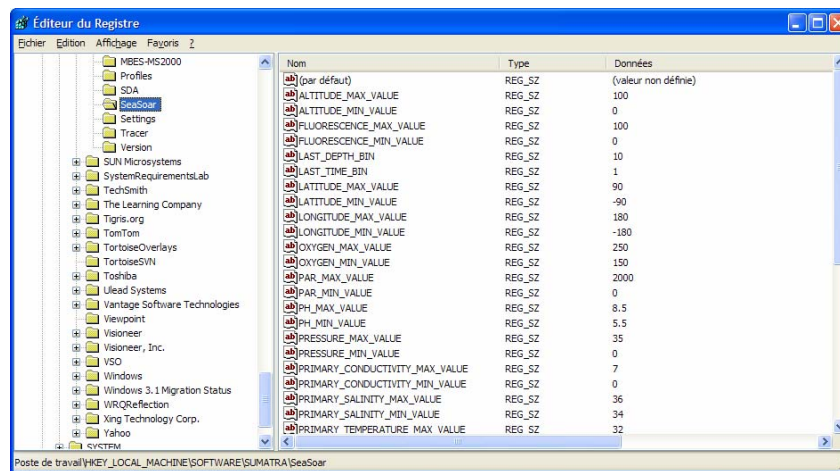
- SDA





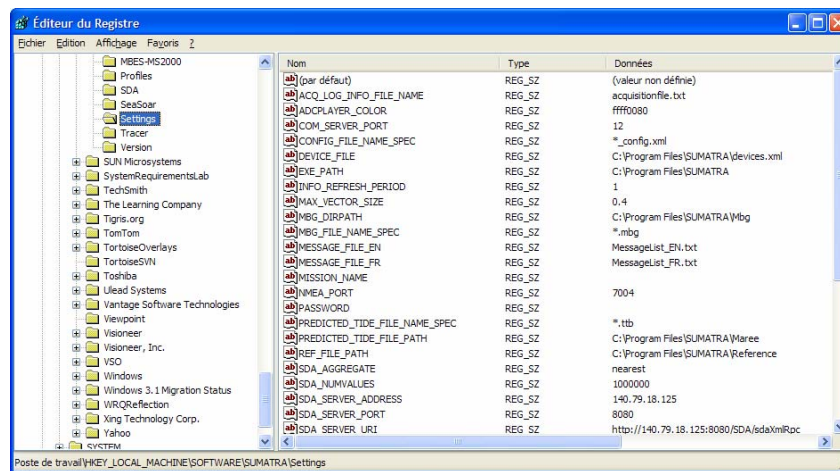
<i>Key</i>	<i>Description</i>	<i>Default</i>	<i>Changeable in MMI SUMATRA</i>
SDA_AGGREGATE	Aggregates to use	nearest	No
SDA_NUMVALUES	Maximum number of lines to return to the table	10000	No
SDA_SERVER_ADDRESS	Address of archived data server	localhost	No
SDA_SERVER_PORT	Port of archived data server	8080	No
SDA_SERVER_URI	URI of archived data server	http://localhost:8080/SDA/sdaXmlRpc	No
SDA_STAMPFRACTION	Dating position in the resampling interval	0.0	No

- Seasoar



Key	Description	Default	Changeable in MMI SUMATRA
LAST_DEPTH_BIN		10	Yes
LAST_TIME_BIN		1	Yes
SALINITY_MAX_VALUE		36.3	Yes
SALINITY_MIN_VALUE		34.7	Yes
TEMPERATURE_MAX		28.3	Yes
TEMPERATURE_MIN		22	Yes

- Settings

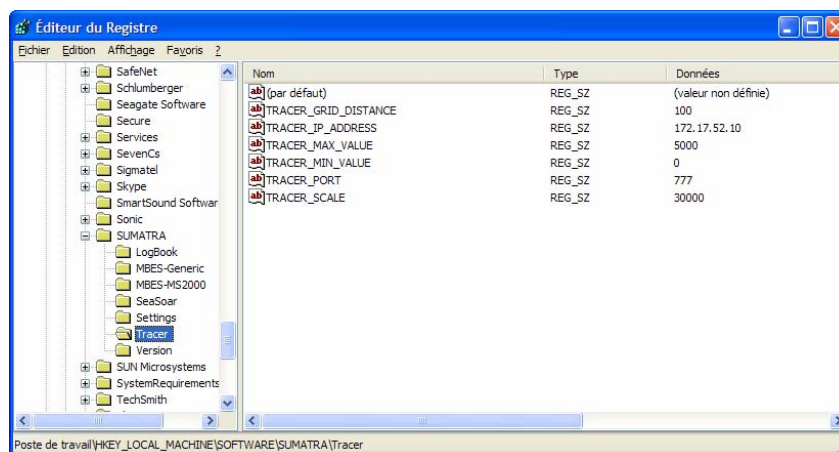


<i>Key</i>	<i>Description</i>	<i>Default</i>	<i>Changeable in MMI SUMATRA</i>
ADCPPLAYER_COLOR	Default color for ADCP vectors	ffff0080	Yes
COM_SERVER_PORT <sup>1</sup>	Port for the communication server inter-process SUMATRA	12	No
CONFIG_FILE_NAME_SPEEC	Extension of configuration files layers SUMATRA XML	*_config.xml	No
DEVICE_FILE	Path and name of devices roster	C:\Program Files\SUMATRA\devices.xml	No
EXE_PATH	Directory path where are install the executables	C:\Program Files\SUMATRA	No
INFO_REFRESH_PERIOD	Period refresh of information's windows mobile type or sensor	1	Yes
MAX_VECTOR_SIZE	Size vectors (example: for the layer of winds)	0.4	Yes
MESSAGE_FILE_EN	Name of file messages in english	MessageList_EN.txt	No
MESSAGE_FILE_FR	Name of file messages in french	MessageList_FR.txt	No
NMEA_PORT	Port where are broadcast the NMEA data for the events Victor 6000 or Nautile	7002	No
PASSWORD	Administrator password	smf	No
PREDICTED_TIDE_FILE_NAME_SPEC	Extension predicted tides files	*.ttb	Yes
PREDICTED_TIDE_FILE_PATH	Path and name of directory of predicted tides files	C:\Program Files\SUMATRA\Maree	Yes
REF_FILE_PATH	Path and name of directory of storage reference files	C:\Program Files\SUMATRA\Reference	No
WINDLAYER_COLOR	Default color for Wind vectors	ffff0080	Yes
WATERFALL_FILE_SUFFIX	Suffix files waterfall	_values.bin	No
WORK_ADM_PATH	Path and name of directories		No

Do not change except in the event of conflict with a port used by an external system.

	patterns of work administrator. The directory should be created.		
WORK_SESSION_PATH	Path and name of directories sessions (default "C:\Program Files\SUMATRA\Modes de travail\Session"). The directory should be created.	C:\Program Files\SUMATRA\Modes de travail\Mode de travail administrateur	No
WORK_USER_PATH	Path and name of directories of custom working modes. The directory should be created.	C:\Program Files\SUMATRA\Modes de travail\Mode de travail personnalisé	No

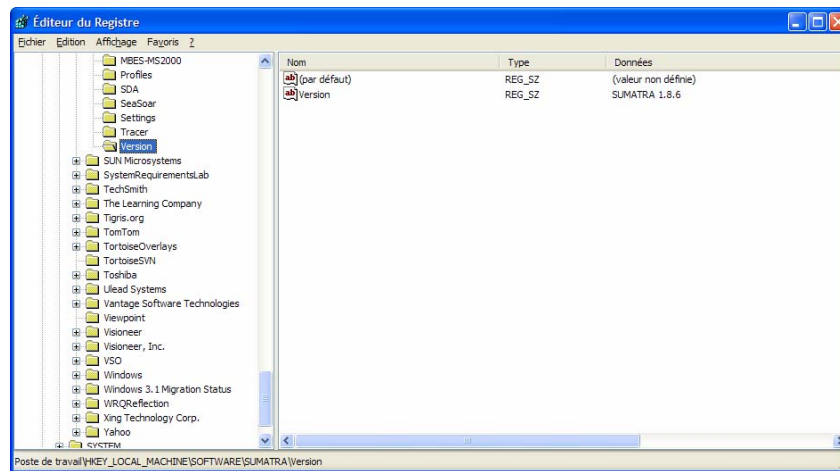
- Tracer



<i>Key</i>	<i>Description</i>	<i>Default</i>	<i>Changeable in MMI SUMATRA</i>
TRACER_GRID_DISTANCE	Default grid distance	100	Yes
TRACER_IP_ADDRESS	Default treacer IP Address	172.17.52.10	Yes
TRACER_MAX_VALUE	Maximum value of contrast	5000	Yes
TRACER_MIN_VALUE	Minimum value of contrast	0	Yes
TRACER_PORT	Listen port for thermal plotter	777	No
TRACER_SCALE	Scale side for printing on thermal plotter	20000 soit une échelle de	Yes

1/20000

- Version



<i>Key</i>	<i>Description</i>	<i>Default</i>	<i>Changeable in MMI SUMATRA</i>
Version	SUMATRA current version	1.8.6	No

During installation, the administrator must update those values in terms of path on this computer.

### 4.3 Device Tracker

The application “SMT\_DeviceTracker” is automatically launched at the end of the installation and every time the computer reboots.

It updates the file “devices.xml” which contains the description of the XML data issued by all facilities.

If this software accidentally stops, then it is necessary to restart it via a Windows Explorer.

### 4.4 Activity

The application “SUMATRA.Activity” is automatically launched at the end of the installation and every time the computer reboots.

It shows the status of acquisition task :

- red : SUMATRA acquisition is NOT currently running
- green : SUMATRA acquisition is currently running

If this software accidentally stops, then it is necessary to restart it via a Windows Explorer.

### 4.5 ADS

Access to the archived data server must be possible from the SUMATRA computer.

Verification of this access can be made via an Internet browser:

Client d'export de données Techas - Microsoft Internet Explorer

File Edit View Favorites History Tools Help

Address http://192.168.21.13:8000/WebApache/html/SdaQuery.html OK Cancel

## SERVEUR DE DONNÉES ARCHIVÉES - REQUÊTE

Start time:

End time:

Reset Recherche

Strategy: ☐ resampling ☐ reference Reference:  Resample interval:  Num values: 1000 Interval stamp fraction:

varid	colname	aggregate	units	default	min	max
super.						
super.						
super.						
super.						
super.						
super.						
super.						
super.						
super.						
super.						

☐ Acquisition of Systeme de navigation 1  
☐ Acquisition of Systeme de navigation 2  
☐ Acquisition of Cap Infrarouge  
☐ Acquisition of Systeme de navigation 3  
☐ Acquisition of Systeme de navigation 4  
☐ Acquisition of Navigation integrale  
☐ Acquisition of Gyrocompas 1  
☐ Acquisition of Gyrocompas 2  
☐ Acquisition of Gyrocompas 3  
☐ Acquisition of octane babord  
☐ Acquisition of octane tribord  
☐ Acquisition of planis  
☐ Acquisition of eaf00 200 k  
☐ Acquisition of moteurs  
☐ Acquisition of sbe21  
☐ Acquisition of rmc  
☐ Acquisition of sbe 38

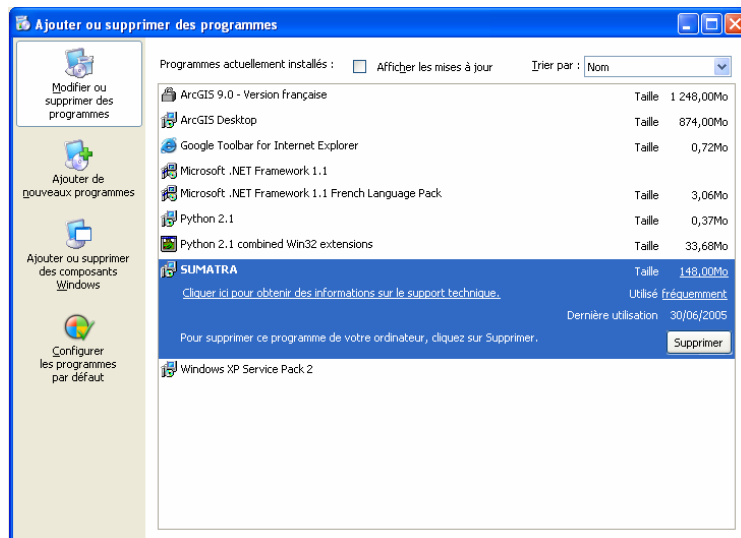
Type de sortie: HTML Archive ZIP: ☐ Reset Exécuter

Terminal

Figure 6 : Interface server access to archived data

## 5 Uninstalling procedure

Uninstalling SUMATRA can be done by launching Setup.exe on the installation CD ROM or via the Control Panel Windows (Start / Parameters / Control Panel / Add Remove Program):



*Figure 7 : Add or remove program*

By clicking on the “Add / Remove” button of SUMATRA, one reaches the next window:

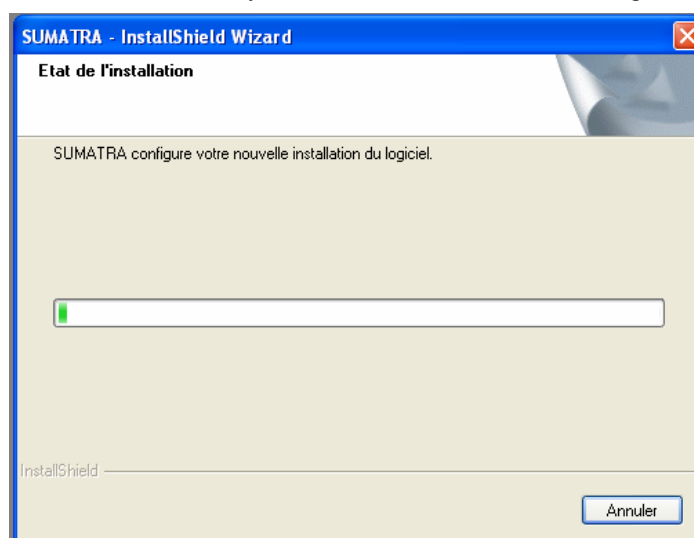


*Figure 8 : Confirmation of uninstalling*

It is then possible to cancel the uninstalling (“Cancel” button) or confirm (“OK” button).

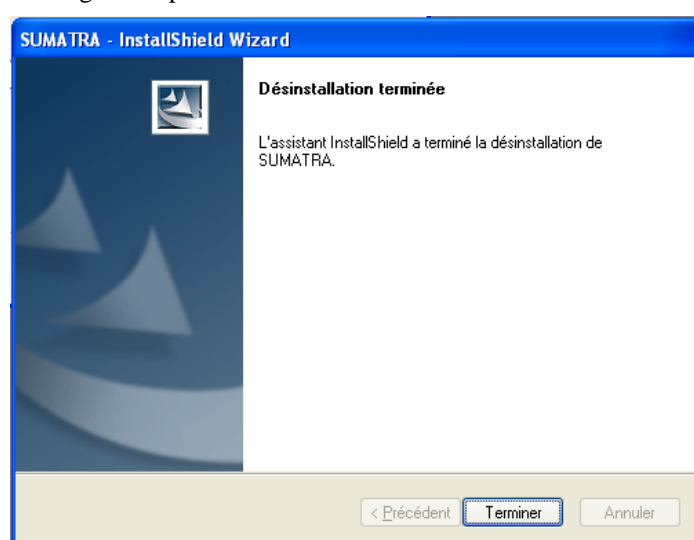


In this case, a window lets you monitor the status of uninstalling:



*Figure 9 : Uninstalling process*

Uninstalling is complete.



*Figure 10 : End of uninstalling*

## 6 Procedure generation

All files necessary for this generation are located in the CD-ROM directory **Development**.

We must copy the directory **SUMATRA** located in **Development** onto the local disk of the computer where we want to make this generation (for example: D:\).

It is then necessary to define the development environment. To do this, you have to start SUMATRA. Run programme “InstallCode.exe” located in **SUMATRA/Dev/Scripts**. It updates the environment variables as well as the registry.

To generate a solution without a problem, it is necessary that the configuration of the computer is in line with what is described in [DR12?].

SUMATRA solution was built on the Microsoft Visual Studio .NET 2005.

The solution comes in the form of a tree in “SUMATRA/Dev” under which there is a file “Sumatra.sln” which is the general solution. There is a folder for each project of the solution.

To open the SUMATRA solution, it is necessary to launch Microsoft Visual Studio, select “File/Open a solution” and select Sumatra.sln under “SUMATRA/Dev”.

At the first opening of the solution, warning messages of Visual Studio related to the control of source code may appear. We must validate these messages. They should not appear in the following openings.

To generate the solution, you must select the menu “Generate/Generate a solution”. The libraries and executables are generated in the directory “SUMATRA/Exe/Release” for a generation with a configuration option “Release” and in “SUMATRA/Exe/Debug” to “Debug”.

